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10/531,725	04/18/2005	Masahiro Ishida	OGW-0362	2313

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EXAMINER

MAKI, STEVEN D

ART UNIT

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/531,725

**Applicant(s)**

ISHIDA, MASAHIRO

**Examiner**

Steven D. Maki

**Art Unit**

1791

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 20 June 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 5-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 5-12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SF/ICE)
- Paper No(s)/Mail Date 062008
- 4) ☐ Interview Summary (PTO-413)
- Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

1) Applicant is advised that should claim 8 be found allowable, claim 9 will be objected to under 37 CFR 1.75 as being a substantial duplicate thereof. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

Claim 9 has the same scope as claim 8.

2) The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3) **Claims 5-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over German 475 (DE 4239475) in view of Japan 711 (JP 2002-059711) and Japan 829 (JP 07-164829).**

German 475, directed to a tread design producing good aquaplaning properties but without increasing roll noise, discloses a vehicle tire (pneumatic tire) with a tread comprising arc shaped grooves. **The arc-shaped grooves are connected together such that an "arcuate curved main groove" having a continuous inner edge is provided on each side of the tread center (figure 1 or figure 6).** In claim 11, "plurality of arcuate grooves that are circumferentially formed, said arcuate grooves including adjacent inner side edges, that face said circumferential straight main groove and that are connected to each other, so as to be continuous in a repeated manner"

reads on German 475's connected arc shaped grooves shown for example in figure 1 or figure 6. German 475 also teaches providing a wide central groove 10 at the tread center 2c to improve aquaplaning resistance wherein the wide central groove 10 has a straight configuration. See figure 9. **German 475 teaches that the wide central groove 10 may be used in all of the disclosed embodiments and not just the figure 9 embodiment.** See paragraph 40 of the machine translation. Hence, German 475 substantially discloses the claimed invention except for the smaller width circumferential auxiliary grooves.

As to claim 11, it would have been obvious to one of ordinary skill in the art to provide German 475's directional tread pattern with auxiliary circumferential grooves having a width of less than 2 mm so as to have a width less than that of the straight wide central groove 10 and the "arcuate curved main grooves" (4a, 4b, 4c) formed by the connected arc shaped grooves 4 since Japan 711 suggests providing a directional tread pattern comprising main circumferential grooves having a width of 4-12 mm with **narrow circumferential grooves having a width of 2 mm or less to increase wandering performance and prevent wear** (paragraph 31 of machine translation). Hence, Japan 711 motivates one of ordinary skill in the art to provide German 475's directional tread with "narrow auxiliary circumferential grooves" having a width (i.e. 2 mm or less) less than the width arc-shaped main grooves and wide central main groove to increase wandering performance and prevent wear. One of ordinary skill in the art would have readily appreciated that German 475's "arcuate curved main grooves" ("inner circumferential grooves") and "wide central groove" ("center circumferential

groove") can and should have a width greater than the width of 2 mm or less for the circumferential groove 20 suggested by Japan 711 since these grooves of German 475 are for channeling water and improving aquaplaning performance.

With respect to diagonal grooves, each of German 475's arc shaped grooves extends diagonally to the tread edge and Japan 711 suggests locating the narrow circumferential grooves near the tread edges such that they cross diagonal grooves.

With respect to without extending to an outer edge, it would have been obvious to one of ordinary skill in the art to form German 475's **inclined grooves 4** (which extend from the central region of the tread) such that their outer edge portions are located within the tread shoulder region without extending to an outer edge of the tread shoulder region in view of Japan 829's suggestion to form inclined grooves 3 (which extend from a central region of the tread) such that their outer edge portions are located within the tread shoulder region without extending to the outer edge of the tread shoulder region to suppress pattern noise and improve wet performance without deteriorating the steering stability (figure 1, abstract). With respect to Japan 829's teaching to terminate inclined grooves 3 within tread shoulder regions (the outer edges of which define tread width TW), it is noted that Japan 711 also shows inclined grooves (i.e. grooves 19) terminating within a tread shoulder region.

With respect to terminating prior to reaching said arcuate main grooves, it would have been obvious to one of ordinary skill in the art to form German 475's **inclined grooves 3** such that they extend from the outer edge of the tread shoulder region and extend into the tread center region without reaching the arcuate main grooves ("inner

circumferential grooves") in view of Japan 829's suggestion to extend inclined grooves 2 of a tire having suppressed pattern noise and improved wet performance from the outer edge of the tread shoulder region and into the tread center region without reaching the inner circumferential grooves. Attention is directed to grooves 2, 2p in Japan 829. With respect to Japan 829's teaching to terminate inclined grooves 2, 2p in the tread center region, it is noted that Japan 711 also shows inclined grooves (i.e. grooves 24) terminating in the tread center region.

As to claim 5, it would have been obvious to one of ordinary skill in the art to provide the straight main wide central groove and the arcuate curved main groove with widths of 5-15 mm in view of (1) German 475's teaching to use "main" grooves 4 and 10 for improving aquaplaning performance and (2) Japan 711's teaching to form main grooves in a tire tread with a width of 4-12 mm.

As to claim 6, Japan 711 teaches a width of 2 mm for the narrow circumferential grooves 20.

As to claim 7, it would have been obvious to one of ordinary skill in the art to provide the inclined grooves (the arc shaped grooves between the "arcuate curved main groove" and the tread edge) with a width of 1-7 mm in view of (1) German 475's teaching to use "main" grooves 4 for improving aquaplaning performance and (2) Japan 711's teaching to form main grooves in a tire tread with a width of 4-12 mm.

As to claims 8-10, note "convex" shape for grooves 4 in figures 1, 6 or figure 9 of German 475.

4) **Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over German 475 (DE 4239475) in view of Japan 711 (JP 2002-059711) and Japan 829 (JP 07-164829) as applied above and further in view of Japan 208 (JP 03-074208).**

With respect to claim 12 (see through state), it would have been obvious to one of ordinary skill in the art to provide German 475's connected arc-shaped main grooves such that the "arcuate curved main grooves" are circumferentially formed to be in a see through state since (1) German 475 shows that the curvature of the arc shaped grooves 4 for improving aquaplaning may be such that the connected arc shaped main grooves form a relatively straight "arcuate curved main groove" (see left side of figure 9) and (2) Japan 208, directed to a tread design for improved dry and wet performance, suggests connecting grooves such that the connected grooves are circumferentially formed to be in a see through state defining a width w to prevent lowering of drainage property. Hence, German 475 and Japan 208 disclose the same feature of a *circumferential groove having non-linear edges* and Japan 208 motivates one of ordinary skill in the art to increase the width of such a groove to form a "window" to prevent lowering of drainage property.

#### Remarks

5) Applicant's arguments with respect to claims 5-12 have been considered but are moot in view of the new ground(s) of rejection.

Applicant's arguments filed 6-20-08 have been fully considered but they are not persuasive.

Applicant argues that grooves 3 and 4 in German 475 should reach the edge of a bearing surface. Examiner agrees that German 475's grooves 3 and 4 should reach the ground contact edge of the ground contact area (bearing surface) of the tread.

Applicant argues that Japan 829 does not disclose that subgrooves should not extend to the outer edges of the tread shoulder region. Applicant is incorrect. Attention is directed to grooves 3 in Figure 1 of Japan 829. Applicant is confusing the ground contact outer edges of the tread (these edges defining width W) with the outer edges of the tread shoulder regions (these edges defining tread width TW).

With respect to applicant's arguments regarding German 475, Japan 711 and Japan 829 on page 8 of the response filed 6-20-08, examiner comments that grooves 3 in German 475, grooves 24 in Japan 711 and grooves 2, 2p in Japan 829 terminate in the tread before reaching an inner circumferential groove; the claimed arcuate main groove being an inner circumferential groove.

Applicant argues that the shoulder blocks in the cited references are relatively small such that high operational stability cannot be obtained. This unexpected results argument is not commensurate in scope with the claims and is therefore not persuasive since none of the claims require larger shoulder blocks than that disclosed by the applied prior art.

6) No claim is allowed.

7) Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP



§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

8) Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven D. Maki whose telephone number is (571) 272-1221. The examiner can normally be reached on Mon. - Fri. 8:30 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on (571) 272-1226. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Steven D. Maki/  
Primary Examiner, Art Unit 1791

Steven D. Maki  
September 14, 2008